

HONGO *et al.* -- 09/815,305
Attorney Docket No. 040258-0279274

REMARKS

Reconsideration and the timely allowance of the pending claims, in view of the following remarks, are respectfully requested.

In the Final Office Action dated September 13, 2005, claims 26, 28-29, 37, 39-40, and 44-45 were rejected, under 35 U.S.C. § 103(a), as allegedly being unpatentable over Li '771 (US Patent No. 5,772,771); claims 27 and 38 were rejected, under 35 U.S.C. § 103(a), as allegedly being unpatentable over Li '771 in view of Tomoyasu '103 (US Pat. No. 5,900,103); and claims 26-29, 31-32, 37-40, and 42-45 were rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Tei '215 (US Patent Pub. No. 2002/0011215) in view of Tomoyasu '103 and Li '771.

By this Amendment, claims 26 and 37 have been amended to provide a clearer presentation of the claimed subject matter. Applicants submit that no new matter has been introduced. As such, claims 26-29, 31-33, 37-40, 42-43, and 44-45 are currently presented for examination of which claims 26, 37, and 44 are independent.

Applicants respectfully traverse the prior art rejections, under 35 U.S.C. §103(a), for the reasons presented below.

I. Prior Art Rejections of Claims 26, 37, & 44

As indicated above, independent claim 26 now positively recites that the second vacuum pump is connected to the gas introducing portion through the gas exhaust line so as to evacuate the volume inside the gas introducing portion without passing through the gas supply line. Such features are amply supported by the embodiments disclosed in the Specification. (See, e.g., Specification: page 21, line 24 – page 22, line 31: FIGs. 1, 6A, 6B). And, in accordance with these features, the volume inside the gas introducing portion can be evacuated rapidly and efficiently since the gas evacuating line has a smaller exhaust conductance.

In contrast to the Examiner's assertions, there is nothing in any of the applied references that teach or suggest the combination of features recited in claim 26. In particular, the Li '771 reference discloses a vacuum pump 84, which the Examiner asserts corresponds

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to the claimed second vacuum pump. (See, Office Action: page 3). The Li '771 reference further discloses that vacuum pump 84 is connected to the common gas feed line 80, which the Examiner asserts corresponds to the claimed gas supply line. (See, Li et al.: col. 4, lines 49-54; FIG. 5).

In so doing, Li '771 fails to teach or suggest that the second vacuum pump is connected to the gas introducing portion through the gas exhaust line so as to evacuate the volume inside the gas introducing portion without passing through the gas supply line, as required by claim 26. In fact, by virtue of explicitly teaching that vacuum pump 84 is connected to common gas feed line 80, Li '771 clearly *teaches away* from the claimed subject matter.

Applicants submit that none of the other references applied to claim 26 are capable of curing the defects of the Li '771 reference noted above. Indeed, the additional rejection of claim 26 is based on the combination of Tei '215, Tomoyasu '103, and Li '771 in which Li '771 is, once again, relied upon to teach the use of a gas supply line connected to the gas introducing portion. (See, Office Action: page 6). Given that the Li '771 reference is flawed for reasons already identified above, none of these references whether taken alone or in combination are capable of curing, much less, teaching the claimed combination of elements required by claim 26.

For at least these reasons, Applicants submit that claim 26 is clearly patentable over the references of record. Accordingly, the immediate withdrawal of all prior art rejections of claim 26 is respectfully requested. Moreover, because claims 27-29 depend from claim 26, claims 27-29 are also patentable by virtue of dependency as well as for their additional recitations. Also, because claim 44 positively recites features similar to the features of claim 26, which have been shown to be patentable, namely that the second vacuum pump is connected to the gas exhaust line, claim 44 is patentable for at least the reasons identified relative to claim 26. And, because claim 45 depends from claim 44, claim 45 is also patentable by virtue of dependency as well as for its additional recitations.

Regarding the rejections of claim 36, claim 36 positively recites the use of a bypass line having a first end connected to the gas introducing portion and a second end connected to the vacuum device so as to evacuate a volume inside the gas introducing portion. Such

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features are amply supported by the embodiments disclosed in the Specification. (*See, e.g.,* Specification: page 43, line 1 – page 4, line 1: FIG. 20).

Unlike the present invention, there is nothing in any of the applied references that teach or suggest the combination of features recited in claim 37. In particular, the Examiner acknowledged that Li '771 fails to teach the use of a bypass line, but then summarily asserted that in order to reduce overall size and complexity, replacing the vacuum pump 84 of the Li '771 apparatus with a bypass that connects to the first vacuum pump would have been obvious. (*See, Office Action: page 4*).

Applicants respectfully remind the Examiner that, pursuant to MPEP § 706.02(j), in order to establish a *prima facie* case of obviousness, there *must be some suggestion or motivation*, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference.

With this said, there is absolutely nothing in the Li '771 reference that remotely teaches or suggests providing a bypass line having a first end connected to the gas introducing portion and a second end connected to the vacuum device so as to evacuate a volume inside the gas introducing portion, as required by claim 37. In fact, Li '771 does not even explicitly teach a first vacuum pump, much less provide any suggestion whatsoever that the vacuum pump 84 could be replaced by a bypass that connects to the first vacuum pump. If anything, by virtue of disclosing the configuration in which the vacuum pump 84 is connected to the common gas feed line 80 for a specific purpose, it appears that the Li '771 reference teaches away from replacing the vacuum pump 84 with a bypass line. At the very least, Applicants respectfully submit that the Examiner has clearly failed to establish a threshold level of a *prima facie* case that would render these features obvious. And, any assertions to the contrary can only be based on impermissible hindsight.

Applicants further submit that none of the other references applied to claim 37 are capable of curing the defects of the Li '771 reference noted above. That is, like Li '771, the Tei '215 reference discloses absolutely nothing that relates to a bypass line. And, although the Tomoyasu '103 reference does disclose a bypass 750, the bypass is *not* connected to the common exhaust mechanism 45 (*i.e.*, a vacuum pump of the process chamber), but connected to a clean-up unit. (*See, Tomoyasu '103: FIG. 35*)

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Indeed, the Examiner acknowledged the lack of disclosure regarding the bypass line and, once again, attempted to rely on the assertion that it would have been obvious to modify the configurations of each of the taught systems to provide such a feature. (*See*, Office Action: page 7). Applicants respectfully submit that, for the reasons already noted above, such an assertion is without merit and can only be based on impermissible hindsight.

II. Conclusion.

All matters having been addressed and in view of the foregoing, Applicants respectfully request the entry of this Amendment, the Examiner's reconsideration of this application, and the immediate allowance of all pending claims.

Applicants' Counsel remains ready to assist the Examiner in any way to facilitate and expedite the prosecution of this matter. Please charge any fees associated with the submission of this paper to Deposit Account Number 033975, Order No. 040258-0279274.

The Commissioner for Patents is also authorized to credit any over payments to the above-referenced Deposit Account.

Respectfully submitted,

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